SUMMARY OF
AV-8B RADAR NIGTH ATTACK WEAPONS SYSTEM TRAINER
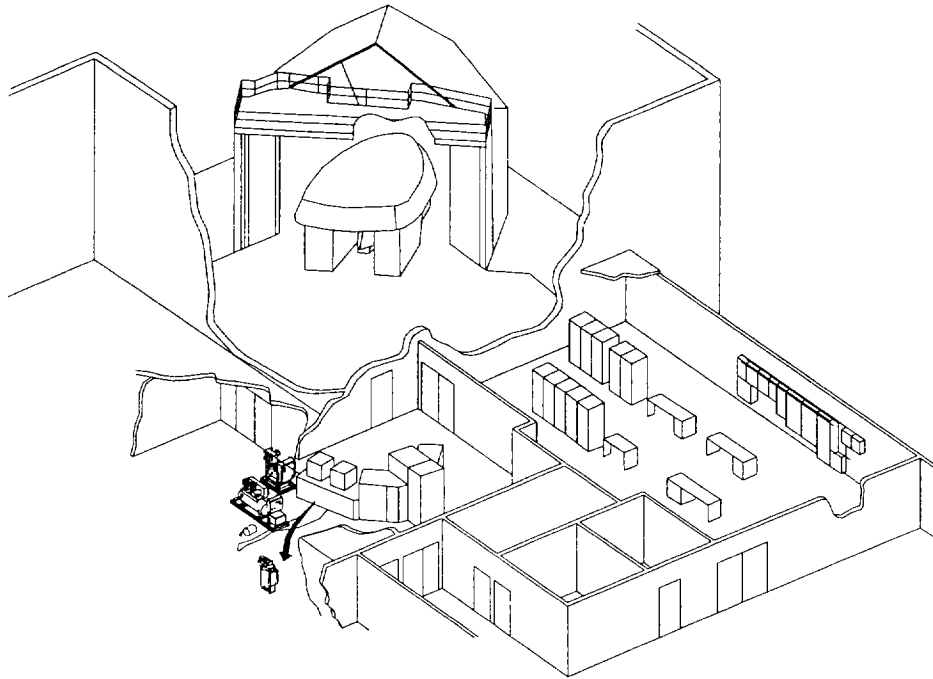
TRAINING CATEGORY:

AVIATION

ORIGINATING AGENCY:

CNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 2F150B is SECRET.

PURPOSE OF DEVICE:

Develop pilot proficiency in AV-8B Harrier II Plus, radar equipped aircraft operations in day and night environments.

INTENDED USE

Device 2F150B is used to train student pilots in AV-8B Harrier II Plus operational and tactical operations in day and night environments. Operational procedures include: VSTOL and conventional takeoff and landing, aircraft control and instrument flight procedures. Tactical procedures include weapons delivery, low altitude tactics, offensive air combat maneuvering, defensive electronic countermeasures, and AN/APG-65 radar operation. The RNAWST is also used to reinforce training in normal/degraded emergency operations of simulated aircraft systems.

FUNCTIONAL DESCRIPTION:

Device 2F150B is installed in a multiroom facility with a high bay area. Device 2F150B is grouped and located in adjacent rooms which include: Trainee Station, Instructor Operator Station, Computer Room and Utility Room.

The trainee station includes a full size replica of the AV-8B Harrier II Plus crew station and a visual scene projection system. The crew station contains control, indicators, and cockpit equipment required to perform the training mission. Crew station multi-purpose color displays provide simulated AN/APG-65 radar images. A

flight control system simulates AV-8B Harrier II Plus flight control characteristics. A g-suit/seat, g-dimming, and buffet system simulates g-forces and motion cueing. An aural simulation system simulates the AV-8B crew station aural environment. A communications system simulates all COM/NAV capabilities.

Computer image generation (CIG) equipment develops imagery video for the trainer dynamic visual scenes. The dynamic visual scenes simulate a 540 by 540 nautical mile area and include geo-specific texture obtained from satellite data and aerial photography, special target areas, and weapons effects. A separate image generation system develops simulated AN/APG-65 imagery.

The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select, initiate, and record the training missions and monitor and evaluate trainee performance. Basic operating modes include planning, training, demonstrations, and replay. Demonstration, instant replay and simulation freeze operations are provided to emphasize a particular situation during the training session.

PHISYSICAL INFORMATION

Trainee Station Room – 40" high x 51" wide x 54" long.

Computer Room – 10" high x 30" wide x 54" long.

Instructor Operator Station Room – 10" high x 22" wide x 32" long.

Utility Room – 10" high x 17" wide x 29" long.

Debrief Room – 10" high x 11" wide x 13" long.

Total floor Area – 5,714 square feet

EQUIPMENT REQUIRED (Not Supplied):

None

POWER REQUIREMENTS:

120 / 208 vac, 5 wire, 60 Hz, three phase, 700 amperes per phase maximum.

PUBLICATIONS FURNISHED:

Maintenance Instructions, AV-8B RNAWST Device 2F150B, NAVTRADEV P-8086, (U).

Maintenance Requirement Cards, AV-8B RNAWST Device 2F150B, NAVTRADEV P-8087, (U).

Trainer Systems Utilization Handbook, AV-8B RNAWST Device 2F150B, P-8089, (U)

PERSONNEL:

Instructor – One (1) instructor pilot qualified in AV-8B weapons systems training procedures in day and night environments.

Operator – One (1) MARCOR civilian to assist the instructor pilot.

Trainee – One (1) student pilot.

Maintenance Personnel – Six (6) MARCOR civilian personnel.

CONTRACT IDENTIFICATION:

Manufactured by INDRA Sistemas, S.A., under NAWCTSD Contract N°. N61339-97-C-0005.